



## Idaho Department of Environmental Quality **DRAFT §401 Water Quality Certification**

February 14, 2007

NPDES Permit Number: **IDR05-0000** Multi-Sector General Permits for Stormwater Discharges Associated with Industrial Activity (MSGP)

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Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended, 33 USC Section 1341 (a)(1), and Idaho Code §§ 39-101 et.seq., and 39-3601 et.seq., the Idaho Department of Environmental Quality (IDEQ) has authority to review National Pollution Discharge Elimination System (NPDES) permits and issue a water quality certification decision.

IDEQ certifies that if the permittees comply with the terms and conditions imposed by the above-referenced permit along with the conditions set forth in this water quality certification, then there is reasonable assurance the discharges will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, including the Idaho Water Quality Standards (WQS) (IDAPA 58.01.02).

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations or permits, including without limitation, the approval from the owner of a private water conveyance system, if one is required, to use the system in connection with the permitted activities.

### **CONDITIONS THAT ARE NECESSARY TO ASSURE COMPLIANCE WITH WATER QUALITY STANDARDS**

#### *pH limitations*

The MSGP proposes a pH range of 6.0 – 9.0, which does not comply with Idaho WQS (IDAPA 58.01.02.250.01.a). Therefore, numeric effluent limitations and benchmark monitoring cutoff concentrations for pH shall be 6.5 – 9.0.

#### *Follow-up Monitoring*

Numeric effluent limitations for arsenic (subsector K2), chromium (subsector K2), and zinc (subsectors K2 and L3) exceed applicable WQS. However, DEQ believes it is inappropriate to set numeric effluent limitations equivalent to state WQS at this time due to the lack of sufficient data to determine if the discharge causes or contributes to a WQS violation. Instead, DEQ requires that whenever the discharge exceeds applicable WQS for these parameters, the permittee must take corrective action(s), document those corrective actions in the SWPPP, conduct follow-up monitoring, and report the

exceedances(s) in accordance with the MSGP and applicable conditions of this certification.

#### *Hardness-dependent metals*

The MSGP proposes hardness-dependent benchmarks based on *ranges* of hardness values (in 25 mg/L increments) for the following parameters: cadmium, chromium, copper, lead, nickel, silver, and zinc. For each hardness range greater than 25 mg/L, EPA used the mean hardness value to calculate the benchmark. Since an average hardness is used to calculate a benchmark value, some discharges will be in concentrations greater than the respective water quality criterion especially when the hardness of the water is at the lower end of the benchmark hardness range.

While benchmark values are not enforceable limits, exceedances of these values trigger corrective actions as well as additional monitoring. As such, DEQ believes it is prudent to undertake corrective actions and additional monitoring when discharges are in concentrations greater than the water quality criteria. In order to comply with IDAPA 58.01.02.400.01 to the maximum extent practicable, the appropriate benchmark values for hardness dependent metals shall be calculated using equations listed in Table 1. For purposes of calculating benchmark values, the minimum and maximum hardness values allowed are 25 mg/L and 400 mg/L, respectively.

Table 1: Calculation of Benchmark Values (total recoverable) for Hardness-Dependent Metals

PARAMETER	Benchmark value (µg/L)
Cadmium <sup>1</sup>	$= \{ \text{EXP}^{(0.8367 * \text{LN}(\text{hardness}) - 3.56)} \} / 0.944$
Chromium (III)	$= \text{EXP}^{(0.819 * \text{LN}(\text{hardness}) + 3.7256)}$
Copper	$= \text{EXP}^{(0.9422 * \text{LN}(\text{hardness}) - 1.464)}$
Lead	$= \text{EXP}^{(1.273 * \text{LN}(\text{hardness}) - 1.46)}$
Nickel	$= \text{EXP}^{(0.846 * \text{LN}(\text{hardness}) + 2.255)}$
Silver	$= \text{EXP}^{(1.72 * \text{LN}(\text{hardness}) - 6.52)}$
Zinc	$= \text{EXP}^{(0.8473 * \text{LN}(\text{hardness}) + 0.884)}$

EXP = base e exponential function; LN = natural logarithm

1. The calculation for the acute cadmium criterion is currently undergoing review at EPA. It is anticipated that this will be approved prior to finalization of the MSGP.

DEQ has a tool for calculating the appropriate water quality criteria for hardness dependent metals available on-line at:

[http://www.deq.idaho.gov/water/data\\_reports/surface\\_water/monitoring/standards.cfm#more](http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/standards.cfm#more).

#### *Numeric Effluent Limitation Monitoring*

Annual monitoring is insufficient to determine compliance with WQS, given the inherent variability in stormwater discharges. As such, monitoring for parameters with numeric effluent limitations must occur twice per year. If, during the first year of the permit, results from the semi-annual monitoring events indicate consistent compliance with the numeric effluent limitations and applicable water quality criteria, then facilities may reduce the monitoring frequency to once per year.

*Monitoring for Dischargers to Impaired Waters with an applicable Waste Load Allocation*

In order to waive any additional monitoring as allowed by the permit, the discharger must also include documentation in their Stormwater Pollution Prevention Plan (SWPPP) that the pollutant(s) of concern is not expected to be present in your discharge. If such documentation can not be made, then the discharger must conduct annual monitoring for the duration of the permit.

*Sector L – Stormwater and Leachate*

Stormwater entering a landfill must be managed as leachate, including run off from areas that have received daily cover which may have contacted waste material, and thus is not eligible for coverage under the MSGP. Stormwater from a closed landfill or from areas of the landfill that have received final cover is not leachate and may be covered under the MSGP.

**ALTERNATIVE LIMITATIONS**

The following subsections discuss how the permit can be made less stringent and still comply with Idaho WQS.

*Benchmark Values*

Benchmark values for arsenic (Sectors A, G, K), and selenium (Sectors G, K) have been proposed as 0.15 mg/L and 0.005 mg/L, respectively. These values are equal to their respective chronic water quality criteria. Given storms are discrete events of relatively short durations, DEQ believes it is more appropriate to utilize the acute water quality criteria as a benchmark values. Therefore, benchmark values for arsenic and selenium can be set equal to the acute criteria of 0.34 mg/L and 0.02 mg/L, respectively and still comply with Idaho WQS.

*Hardness Limitation*

EPA has proposed a maximum hardness value of 250 to be used in the calculation of benchmark values. Use of this maximum value when implementing Idaho's condition for hardness dependent metals is more stringent than Idaho WQS. As such, the permit can be made less stringent by allowing dischargers to use hardness values up to 400 mg/L when calculating the respective benchmark value according to the equations in Table 1 above. This would comply with IDAPA 58.01.02.210.03.c.i.

**ADDITIONAL CONDITIONS**

*Reporting*

Copies of Notice of Intent (NOI) for discharges to impaired waters must be sent to the appropriate DEQ regional office. If you need up to date information or clarification regarding impaired waters and approved or established TMDLs, contact the appropriate regional DEQ office.

When monitoring results exceed benchmark values, numeric effluent limitations, or applicable water quality criteria, the following information must be sent to the appropriate regional DEQ office:

- Your permit identification number;
- Facility name, address, and location;
- Name of receiving water;
- Date and location of sample collection;
- Analytical results; and
- An appropriate contact name and phone number.

In addition, copies of Exceedance Reports must be sent to the appropriate regional DEQ office. Contact information for DEQ offices can be obtained from [http://www.deq.idaho.gov/about/contact\\_us.cfm](http://www.deq.idaho.gov/about/contact_us.cfm).

This certification is conditioned upon the requirement that any material modification of the permit or the permitted activities shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to §401.

Questions or comments regarding the actions taken in this draft certification should be directed to Johnna Sandow, State Office IDEQ at (208) 373-0163 or [Johnna.Sandow@deq.idaho.gov](mailto:Johnna.Sandow@deq.idaho.gov).

A hard copy of the final draft MSGP, which this draft certification is based, can be obtained by providing your mailing address to Misha Vakoc, the Stormwater Coordinator for EPA. Ms. Vakoc can be reached at (206) 553-6650 or [Vakoc.Misha@epa.gov](mailto:Vakoc.Misha@epa.gov). A hard copy of the permit is available for review at the DEQ State Office by contacting Johnna Sandow.



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